UNIVERSITY NEWS

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National Service

★

International Biological Programme

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Gadgil on Education

Golden Jubilee Function

Dr. (Mrs.) P. V. Thackersey, Vice-Chancellor of the S. N. D. T. Women's University, Bombay, welcoming President Zakir Husain who addressed the golden jubilee celebrations of the university last month.

SCHOLARSHIPS & AWARDS

New Commonwealth Scheme

BRITAIN will offer new awards under a Commonwealth scholarship and fellowship plan which will offer prospects to staff employed in universities in developing countries to train for higher posts. This was stated at the Commonwealth education conference by a spokesman of the Commonwealth secretariat at Lagos, Nigeria, recently.

A British memorandum presented to the committee which is reviewing the progress of the scholarship and fellowship plan said the scheme was intended for people who are either doing or who are earmarked for jobs of importance and particularly for those employed by overseas universities.

These awards which would be on the post-doctoral level are intended to enable individuals to be trained for higher posts in universities under a tailored programme rather than a set course, as may only be done under the scholarship and fellowship plan as it exists.

The scholars will spend a period in the British universities not only doing research but also participating in departmental and faculty organisation.

The scheme will start in 1968-69, first with 10 awards. However, the intention is to extend the number gradually in subsequent years up to 50, if possible.

It was also proposed to make a few of the general Commonwealth scholarship awards available for more junior staff in overseas universities. They too will come to British universities on special courses tailored to their work.

The new project is intended to succeed the inter-university council fellowship scheme which began in 1952 and ended last year.

Meanwhile, in the teacher-training programme from 1969-70 academic year, the British Government will pay fares for 50 trainees going to Britain under the Commonwealth teacher-training bursary scheme. Previously, developing countries were responsible for the passages of their trainees, while Britain met the travelling costs.

Japanese Awards

The research institute of telecommunications of Tohoku University, Sendai, Japan, invites application for two scholarships in electronics and electrical communication engineering. The value of scholarship is Yen 30,000 (Rs. 625) per month plus a subsidy of Rs. 750 per annum for study tours and books.

The candidate must have a first class degree or equivalent diploma in electrical engineering/electrical/tele-communication engineering/electronics or a qrst class M.Sc. degree in physics/applied physics with specialisation in electronics and (*b*) three years experience, preferably in research/development/teaching in electronics and related fields after obtaining the aforesaid qualifications. For exceptionally well qualified candidates, conditions in respect of experience may be relaxed.

Applications may be submitted before April 15, 1968 either to the university or to the Ministry of Education, Government of India, Section E.S.I., Shastri Bhawan, 'B' Wing, 5th floor, New Delhi-1.

German Offer

The Alexander von Humboldt foundation of the Federal Republic of Germany invites applications for fellowships in advanced academic research projects at the universities or academic research institutes in the Federal Republic of Germany. The fellowships will be awarded in the various branches of enginering, technology, basic sciences, humanities, fine arts, medicine and surgery.

The duration for fellowships will be "A" ten months; for fellowships "B"—six to twelve months (both the fellowships can be extended. The maximum period of a fellowship will not, however, exceed two years.

The candidate must have a first class master's degree or equivalent qualifications in the subject of research; (*a*) for fellowships "A" at least two years teaching experience and/or research experience at university level after obtaining the master's degree (*b*) for fellowship "B" at least five years teaching and/or research experience at university level after obtaining the master's degree.

Application forms can be had from Alexander von Humboldt foundation fellowships (II) 1968, Post Box No. 445, New Delhi-1, before April 22, 1968.

Mysore Varsity Plan

Mysore University has instituted three awards for research in the fields of languages and fine arts, humanities and social sciences and technology.

Teachers and research workers in any university institution or affiliated college in Mysore state will be eligible to receive the awards on the basis of original work published during the last three years.

The awards, instituted to commemorate the golden jubilee of Mysore University, are worth Rs. 3,000.

Essay Contest

An overseas essay competition on the poetry and works of Mirza Ghalib would be organised by the Ghalib centenary celebrations committee at Lucknow.

Three best writers each in Hindi and Urdu will win a free trip to India during the celebrations in February 1969. They will be taken round the places associated with the Urdu poet during their two-week stay in the country.

The essays will be judged by a panel of five professors of Indian universities.

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National Service, Sports Scheme for Students

From our Special Correspondent

IN pursuance of the Education Commission recommendations to include the national service in the curriculum of university education, the Government of India has recently decided to introduce the national service scheme from the next academic session. Besides, the government plans to introduce another scheme, national sports organisation. The national cadet corps will, however, continue, but it would be optional. In fact, the Education Commission had recommended institution of three new schemes. The basic idea of the national service according to the Education Commission is that it will be "an instrument of building character, improve discipline, inculcate a faith in the academic and manual labour and developing a sense of social responsibility".

The students would have the freedom to opt for any of the three schemes—national service corps, national sports organisation and national cadet corps. The national service corps will include physical training, social service, training in civil defence, general education problems facing the country and programmes of national development, manual labour and community living. The N.S.C. will require students to work for 150 hours a year and attend any camp for 20 days.

The national sports organisation in schools and colleges will help to make sports popular in colleges and universities. Since the N.S.O. (national sports organisation) will promote sports and games, the country, in due course, it is hoped, will have promising sportsmen for participation in national and international events. Students taking up this corps will also be required to spend 20 days in camp in a year. Those who show promise would be further trained at the coaching camps. This is bound to go a long way in improving the health and physical efficiency of our youths.

Since the schemes are to be started this year, it is proposed that only a limited institutions adopt it. About 1,00,000 stu-students are expected to join the N.S.C. this year, while a large number is expected to opt for N.S.O. The schemes will cost the government Rs. 1 crore. Besides, the state governments are also expected to make financial contribution of about Rs. 50 lakhs towards these schemes.

As far the organisation pattern is concerned, the Union Minister of Education, Dr Triguna Sen, would be the chairman of the national service advisory board which will run the scheme. The board will also have ministers of state for education, state education ministers, vice-chancellors and other officials to advise on the various programmes from time to time. A director-general would be overall in charge of the scheme at the centre and the scheme would be implemented in consultation and in collaboration with the various universities and colleges.

Since various types of social service schemes are already in operation in some parts of the country, it is hoped that there would be no difficulty in implementing the scheme. The national service scheme will go a long way in channelising the students' energy in fruitful pursuits. Besides, this is bound to make higher education a powerful instrument of effective social change without sacrificing its fundamental essentials.

NCERT to Spend Rs. 19 Lakhs to Publish New Books

THE National Council of Educational Research and Training proposes to bring out about 690 books in the course of the next five years.

The budget for 1967-68 provides Rs. 23.95 lakhs for the National Council of Educational Research and Training. Out of this, Rs. 19 lakhs has been allocated for the publication programme.

The publication programme of the NCERT expanded enormously during 1966-67 to include a larger programme of model text-books. It also include year books of education (educational research and secondary education), supplementary enrichment educational materials for secondary schools research monographs reports and brochures and low-cost editions of foreign books.

English, Hindi Books

Many of the states and union territories have accepted the council's text-books. The central board of secondary education, Delhi, the central schools organisation and the directorate of education, Delhi, have also accepted the text-books.

These text-books are proposed to be brought out in English and Hindi by the centre and translated into the regional languages by the state governments.

In addition to its text-books programme, the NCERT has a programme for the preparation of supplementary educational material to fit many schemes, like national integration, the promotion of the correct kind of patriotism and enrichment material for a social studies programme based on the council's syllabus for social studies.

The material that has so far been prepared or published is for the 14-17 age group in secondary schools.

Indo-Soviet Scientific Cooperation

IN order to have a close collaboration with the Soviet Union, the Government of India has chalked out a three-year programme of cooperation in scientific studies. The Indo-USSR joint committee for scientific cooperation is proposed to be a permanent body to frame scientific programmes. Eight Soviet members of the committee who were in India recently met the Indian scientists at Delhi.

The report of the committee was presented to Union Minister for Education, Dr Triguna Sen, after a week-long deliberations by the joint committee.

The leader of the Soviet delegation, Academician Vinogradov who is vice-president of the Soviet Academy of Sciences, said India was the first country with which Russia had agreed to cooperate on scientific matters on the scale envisaged in the report of the joint committee.

The UGC chairman, Dr D. S. Kothari, who led the Indian team, said he hoped this mutual assistance would go a long way towards scientific development of this country and the advance of scientific knowledge.

Cooperation between India and the Soviet Union will be confined to research in mathematics, physics, astrophysics and nuclear physics; earth sciences including geophysics, geochemistry, oceanographic studies and problems in geology; chemistry and biological sciences; and social sciences.

A science information centre will be set up in New Delhi. While this centre will supply soviet literature on science, the Institute of Russian studies in New Delhi will collect and disseminate knowledge in the humanities.

U.S. SCIENTIFIC TEAM VISITS INDIA

A FIVE-MEMBER delegation of the U.S. National Science Foundation, recently discussed several plans with the Government of India and the educational authorities on the further development of science education.

The delegation which was is led by Dr. Edward L. Tatum, professor of physiology, Rockefeller University, New York, included Dr Robert S. Morison, professor of biology and director, division of biological science, Cornell University, Dr Kenneth S. Clark, professor of physchology and dean of college of arts and science, University of Rochester; Dr Fred P. Thime, professor of anthropology and vice-president, University of Washington; and Dr Arthur S. Roe, director office of international science activities, U.S. National Science Foundation.

Summer Institutes

The delegation reviewed the progress of the summer science institutes sponsored by the foundation in 1963. These institutes are being conducted every year by the Union Ministry of Education in collaboration with the University Grants Commission and the National Council of Educational Research and Training. In this context, the development of long-term education improvement activities were also discussed so that gains through the summer institutes could be applied throughout the year.

The delegation's programme includeed discussions with educationists and Government officials at New Delhi, Hyderabad, Bangalore, Madras, Bombay, Ahmedabad, Udaipur, Madurai and Mysore.

Plan for Nuclear Research Laboratory in I.A.R.I.

THE United Nations Development Programme (special fund) will assist in setting up of a nuclear research laboratory at the Indian Agricultural Research Institute, New Delhi, soon.

The project for the establishment of a laboratory by the Government of India has been approved by the UNDP.

The UNDP will provide $ 1.4 million for the project while the Government of India $ 1.9 million. It will cost $ 3.3 million in all.

Dr. M. S. Swaminathan, director of the I.A.R.I., has said that the laboratory was planned to expand and intensify the nuclear research activities of the I.A.R.I. as carried out in its various divisions to extend nuclear tools to solving problems in animal nutrition and production and to organize nuclear training programme as a national facility for the scientists of other agricultural institutions and universities in the country.

The laboratory would be "a focus of co-operative activity between the I.A.R.I. and the Bhabha Atomic Research Centre and will supplement the expertise and facilities of these two organisations."

Besides establishing a nuclear research laboratory at the I.A.R.I. the purpose of the project is to extend research and training facilities for nuclear research at three other centres.

Telecommunications Exchange

A SATELLITE telecommunications exchange will be set up in Bombay on the site now vacant following the removal of the Queen Victoria statue near the Cross Maidan.

The exchange is being set up for international public communications by the International Telecommunications Satellite consortium.

The newest cmmounications network will be ready by the end of this year. Similar communication satellites are already functioning in the Atlantic and Pacific Ocean areas.

A multi-storeyed structure is expected to be constructed on the site for installation of the exchange equipment. A microwave tower will form part of the communications system.

The site has been specially chosen for the project as it is very close to the overseas communications service which is participating in the global satellite communications system, and also close to the national trunk exchange which can distribute communications throughout India.

India is one of the signatories to an agreement for setting up a global communications satellite system along with 60 nations who have formed the INTELSAT consortium.

Japan and Australia are also programming their earth stations for working through the Indian ocean satellite in early 1969.

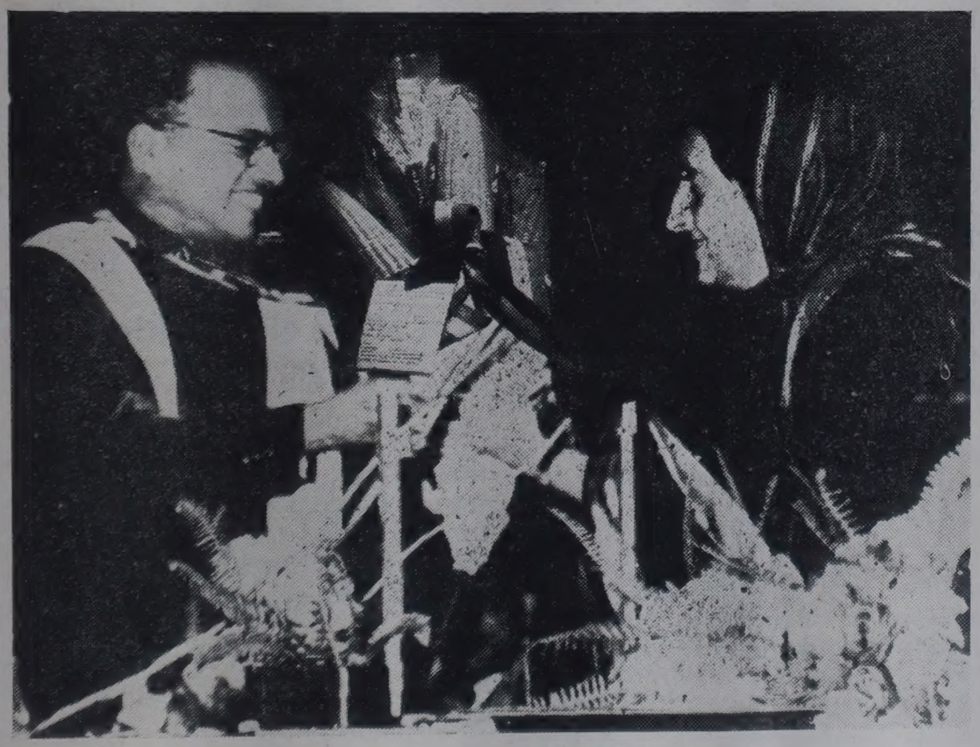
World Illiteracy Rate Drops

The world illiteracy rate dropped between 1960 and 1965 from 44.3 to 39.3 per cent though a total number of illiterates increased from 700 million to 740 million. This has been revealed by a report of U. N. Economic and Social Council presented recently.

The report also reveals that economic gap between developed and developing countries continues to widen.

The problems facing the developing countries have been magnified by the continuing growth of their populations. By mid-1965 the world's population is estimated to have reached 3,295 million—an increase of about 778 million between 1950 and 1965.

In 1960, two out of every three persons lived in a developing country. By 1980 the ratio would be three out of every four.



At IARI Convocation : *Dr M. S. Swaminathan, director, presenting a specially made bouquet of seeds of various grains to Prime Minister Indira Gandhi at the recent convocation of the Indian Agricultural Research Institute. Mrs. Gandhi later addressed the convocation.*

Exciting Way of Teaching Chemistry in Schools and Colleges

A NEW and exciting method of teaching chemistry to all levels of science students was recently demonstrated to teachers throughout India by Professor Hubert N. Alyea, Director of the Frick Chemical Laboratory at Princeton University, U.S.A.

Dr Alyea visited several major educational institutions in India to demonstrate his own methods of science instruction. These make classroom science work more stimulating, easier to understand and yet surprisingly inexpensive. The United States National Science Foundation and India's National Council for Science Education sponsored Dr Alyea's tour.

Dr Alyea has developed a variety of inexpensive equipment and a complete range of scientific experiments. "It is now possible for a science teacher to conduct in a year four complete science courses, each covering 200 different scientific experiments, for only Rs. 35 a year," said Dr Alyea.

Projector

The key to the low cost is that all experiments are conducted "in miniature" on the stage of a simple projector. By casting a magnified image on the wall, the projector makes the experiments visible to even a very large class of students.

Alyea appeared at the All-India Science Teachers' Association who met at Gauhati; two special workshops for teachers in New Delhi, the department of chemistry, Panjab University, Chandigarh; and the university college of science, Osmania University, Hyderabad, and also at some institutas in Mysore and Madras.

The idea of scientific experimentation is a very vital part of India's educational system. The method and devices which Dr Alyea demonstrated to school and college teachers throughout the country may make it possible to expand this campaign without much added cost.

In Rajasthan

In Rajasthan, a pair of bright scientists last year conducted 175 science shows to create interest in scientific experimentation. The two teachers, Mr K. C. Goyal of Rajasthan and Mr Piyush Swami from U. P., toured most of Rajasthan presenting their show to students. Their venture was sponsored jointly by the Regional College of Education at Ajmer, the Rajasthan state institute of science education, and the U.S. Agency for International Development (USAID)

A related programme which is going on in each of India's four regional colleges of education also aims at making classrooms demonstration a daily part of science education. Sponsored by Ohio State University and the USAID, this project lends technical and financial assistance to the institution's science teachers' education programme.

Radio Station for U.P. Farm Varsity

The U.P. Agriculture University at Pantnagar will soon have a radio station of its own.

The radio station, the first of its kind in the Afro-Asian region, will arrange farm broadcasts. The project is expected to help the hill areas to reap the full benefits of a farm university.

21ST INTERNATIONAL GEOGRAPHICAL MEET TO BE HELD IN DELHI

The 21st International Geographical Congress, 12th General Assembly of the International Geographical Union and 3rd General Assembly of the International Cartographic Asscoation would be held in New Delhi between November 13 and December 22, 1968.

Professor S. P. Chatterjee, Director of National Atlas Organisation, Ministry of Education, Government of India, will preside over the session.

Over 2,000 delegates from about 40 countries would participate at discussion on various subjects to be held during the session.

After the inauguration of the various sessions, the assembly will split itself into sections for discussions on subject relating to them. In all, there will be nine sections of the congress, 17 commissons of the I.G.U. and 30 symposia before and after the main session of the congress.

The Government of India is likely to offer Rs 3 lakhs and the British Government has already offered Rs 1,17,000 grants for holding the congress.

College of Education for Delhi

The directorate of education, Delhi Administration, will set up a state college of education for specialized training needed by teachers of science, mathematics, English and social studies.

The college will impart training in advanced techniques of teaching to teachers.

This is being done to improve the methods of teaching in schools. The emphasis will be on improving the teaching of science subjects.

4,000 Indian Students in West German Universities

THERE are more than 4,000 Indian students studying in various West German universities at present, according to Dr. Emil Lehnartz.

This is the largest number of students of any single developing country in German universities.

Dr. Emil Lehnartz, president of the German academic exchange service for the last two years, has been working to strengthen the Indo-German pattern in the field of scientific research since 1962.

Under the exchange programme, 250 Indian students have gone to West Germany to study postgraduate courses in engineering and technological fields during the last five years. Besides, nearly 100 university teachers and administrators have also gone to West Germany on various educational assignments. At present, there are some 40 German lecturers working in different Indian universities under the exchange programme. About 20 German students are also studying in the various Indian universities.

Dr. Emil Lehnartz has opined that there were more possibilities of increasing the exchange of professors and students under the programme.

Dr. Lehnartz affirmed that the Indian students studying in West German universities were highly intelligent and were not in any way inferior to their German counterparts. He was in India recently and visited some universities and institutes of higher learning.

Cancer Council Soon

The Cochin institute is one of the two laboratories providing scientific assistance to the Indian Navy. This laboratory was engaged in carrying out researches in the fields of underwater acoustics, physical oceanography and allied subjects.

The laboratory has recently required newly-constructed building at the cost of Rs. 6 lakhs.

Classroom Lessons Through Computer

A teacherless class of 12 year olds at a West Berlin school is the envy of every pupil in West Germany. For the first time in German classrooms, the teaching is done completely by computer.

The school's principal, Garhard Steffen, said there was only one other classroom like it and that was in Santa Monica, California.

He predicted that the future of teaching lies in the computer's hands—or rather wires. Some experienced teachers may wince at the idea of teaching by computer.

Mr Steffen explained that the new teaching methods was not only completely satisfactory, it has often produced better results than conventional methods. The "teaching machine" in Berlin is programmed to teach a class of 40 simultaneously, but completely individually. Each pupil presses a button in his control box and then gives the answers to the computer's questions. It takes only fractions of a second for the computer to decide whether the answer is right or wrong.

The computer then gauges his teaching programme to the progress of the individual students. Each teaching session with the computer is programmed to take no more than 30 minutes.

DICTIONARY OF TECHNICAL TERMS

THE Central Government plans to bring out a dictionary of technical terms making a total of one million words. Of this, 60 per cent would be from Sanskrit, 30 per cent from English, Russian and German and the remainder from the state languages.

When this dictionary is brought out, the whole of India would have these million words in common, said Mr. Vijay Kumar Malhotra, Chief Executive Councillor of the Delhi, at Madras recently.

The Centre had also given Rs 18 crores, at the rate of Rs 1 crore to each state. They would have their own translation in the regional language of the English technical terms.

He said they had accepted the international numerals. They were particular their own employees must use the Devanagri script, albeit with a mixture of English words. At present, employees must put their signatures in Hindi.

CONQUEST OF CANCER

The 'gas centrifuge" a tool in the making of atom bombs, may provide the breakthrough in the final conquest of cancer.

"This is a major, completely unexpected by-product of the atomic energy programme," said Mr Alvin Weinberg, Director of the US Atomic Energy Commission's National Laboratory at Oak Ridge, Tennessee, recently where the military centrifuge is being converted to medical work.

The modern centrifuging may help detect and isolate the viruses that cancer researchers believe cause most forms of human cancer.

One study already under way with 500 cancer patients in five US medical centres involved collective blood samples from patients to search the incredibly tiny and elusive remnants of viruses, called t-antigens.

Vital Need for Students Services in Universities

By M. G. Bhatawadeker

Deputy Director, Maharaja College, Jaipur

RECENTLY growing unrest and a feeling of frustration has been noticed amongst the student community in the country. Perhaps it is a menifestation of our social, political and economical upheaval. Several well-known educationists and educational psychologists have suggested some effective cures to these ills in the form of a student services organisation. The Education Commission also gave some important suggestions in this direction—but no one seems to be clear about the organisational set-up of such an organisation. This article will try to outline the possible pattern of a students' services organisation.

Educational institutions in Rajasthan, (except professional and technical institutions) after school stage can broadly be divided into three categories—(*a*) undergraduate college : private as well as Government. Here the main activity is teaching the undergraduate classes. A good teacher is defined as one who advances the frontiers of his students' knowledge and effectively shares this with them. But practically a teacher at such institutions confines to the syllabus only. (*b*) postgraduate college : Here primarily the student-population is undergraduate but there are a few postgraduate departments also. It is not unusual to find a couple of teachers engaged in research but primarily the main activity is teaching. The college is adjudged not so much by its activities at the postgraduate stage, but its overall performance including the undergraduate. (*c*) The university : In Rajasthan, there are three universities : the Birla Institute of Technology is not included. Of these three universities, two are unitary while that of Rajasthan is affiliating. The selection and promotion of university teacher is primarily based on academic achievements. The recent recruitment at any of the department of any of these institutions will amply prove this statement. If a teacher is called upon not only to advance the frontiers of his knowledge and to impart them to his students, but to develop the total personality of his pupil, something more than mere academic achievements is also needed. Persons with such unique combinations are only exceptions. In addition, a university is judged more by its performance at the postgraduate level and at research. A university professor gets recognition outside by his research and not by his teaching. The University of Rajasthan present still more a complex picture. Its postgraduate teaching is located separately from its undergraduate teaching. Even with the acceptance of facultywise teaching pattern, how far the above will be remedied is yet to be seen.

Unrest

The organisation of student services at these three different types of institutions where expectations and aspirations are diferent is bound to be different. In fact, all the major student troubles can be traced back to the university centres.

At undergraduate institution, students services do not pose any problem at present. The organisation can be woven round the principal as dean of students. The teachers can be called upon to do various extra duties taking into consideration their aptitudes. While making selections, the candidates' achievements in other fields other than academic should get due recognition (as was the practice in the past). The knowledge of the, subject of course, is necessary but other requirements of the institution cannot be neglected in selections.

The same pattern may serve for a postgraduate college also. Only because of the size of the college, it might be necessary to appoint separately a dean of students. Dean of student along with a couple of other assistant deans looking after some important aspects of students services may be given concession in teaching load or an honorarium. This number may be kept as low as possible.

As for student services at a university level are concerned, facultywise organisation will be possible, others will be combined for all the faculties like counselling, hostel, health, information centre, etc.

A faculty as a unit should be governed by :

(A) an academic and administrative dean; (B) a student dean. The functions of—(A) would be to govern the faculty in general. It will also be responsible for admissions, time-table, examinations, collection of fees, academic advising, administration of staff, etc. Under (B) will fall the student services like orientation, student activities viz. (*a*) union (*b*) debating society (*c*) dramatics (*d*) subject associations (*e*) extra academic advising (*f*) financial help (*g*) student paper (*h*) games and sports and (*i*) discipline.

Financial Assistance

The dean of student may be a senior faculty member (professor) with an academic designation. But he will have reduced teaching assignment. Under him there should be at least three assistant deans—again faculty members with academic designations but with reduced teaching load—looking after (*a*) union (*b*) discipline and (*c*) extra academic advising. Teachers needed for debating society, dramatics, subject associations etc. should be nominated by student organisations. For extra academic advising at least one

(*Continued on page 23*)

International Biological Programme and Its Significance for India

By Prof. B.R. Seshachar, Chairman
International Committee for Biological Sciences

SCIENCE is truly international and scientific enquiry in modern times is not confined to one group of individuals or even to a few countries. For fruitful and far-reaching results, international cooperation is imperative. Such cooperation has, in the past, produced significant advances in the physical sciences. The international geophysical year, for instance, obtanied information of great significance about the physical and chemical environment of the earth. It was logical to expect that this should lead to the understanding of the living layer around the earth.

Encouraged by the success of international collaboration in the physical sciences, biologists have now set up an international programme for cooperation among countries in the world to stimulate studies on environmental biology. Its activities are directed towards a renewed thinking of man in relation to his environment; it will focus attention on world's resources and their proper utilization; it will help create new resources; it will assist in the understanding of the needs of man in his varied environments. This is the International Biological Programme (IBP) which, after a two-year period of preparatory work became functionally operative in July 1967. So far, 60 countries are participating in this programme. India is one of them. The programme is expected to last five to seven years during which there would be much opportunity for exchange of valuable information on the biological processes responsible for productivity and their bearing on man and his environment.

The IBP is motivated by a global purpose. Its aims are two-fold: it has conceived a world-wide basic enquiry into organic production on land, in the fresh waters and the oceans of the earth, with a view to making estimates of the possible output of existing as well as new and potentially promising natural resources. In addition, the programme envisages an international basic study of human adaptability under varied and changing environments.

Common Aim

Evidently a programme of this magnitude can be achieved only by the cooperation of several different nations. The common aim of the IBP is "*the biological basis of productivity and human welfare*". Its activities fall under the following seven sections:

- CT: Conservation of Terrestrial Communities.
- PT: Productivity of Terrestrial Communities.
- PP: Production Processes.
- PF: Productivity of Freshwater Communities.
- PM: Productivity of Marine Communities.
- HA: Human Adaptability.
- UM: Use of Management of Biological Resources.

An international scientific committee (SCIBP) consisting of about 25 members representing the principal regions of the world has been set up with its headquarters in London. The present president of the scientific committee is Prof. J. G. Baer of Switzerland and the scientific director, Dr. E. B. Worthington. The central office of the IBP is located at 7, Marylebone Road, London N.W.1. Each of the sections has a committee to assist it in the formulation of the relevant part of the programme.

The IBP is of special significance to India which, like many other developing countries, is faced with the twin problems of population explosion and inadequate food supplies. We should not only produce more to feed the 12 millions being added to our population every year, but we should also check population growth. It is now clear that improvements in our resources should keep pace with all-out efforts to check population growth. In addition, the vastness of our country, the great variety of physical and biological environments it offers, the differences in the ethnic groups of its human populations, the great variety of their social habits and traditions, some of which are many thousands of years old, all offer unique opportunities, perhaps unrivalled, for study.

Environments

In a country with such varied environments, a study of the major ecosystems is therefore important to obtain basic data on productivity levels, energy flow and mineral and water cycling. It involves a close collaboration of a variety of disciplines such as meteorology, geography, agronomy, forestry etc. Thus the study of environmental biology, a hitherto neglected subject, will receive a new impetus under the IBP. IBP projects are therefore multidisciplinary in their approach.

It is not only necessary to understand nature; it is even more important to conserve it. Due to the impact of man, a large number of areas in the country are being changed or altered with the consequence that the natural habitats of a number of animals and plants are being disturbed. It is well-known that several species of animals have become extinct in India and many others are in the process of

becoming extinct. A judicious programme of conservation of terrestrial communities in order to preserve and maintain an adequate balance of nature is therefore one of the most important programmes under the IBP.

The Government of India has set up a national committee for biological sciences to coordinate and serve as a clearing house for biological work conducted under the various organisations in the country and to cooperate with the international special committee for IBP.

Early last year, a symposium on "biological productivity of our lands, lakes and sea and human adaptability to changing conditions" was held in New Delhi under the direction of the chairman of the national committee for biological sciences. Forty scientists in various disciplines from different parts of India participated in the symposium. In general, an adequate picture was presented of the existing patterns of research on productivity on land, in fresh water, and the sea as well as some aspects of human adaptability.

The national committee with the assistance of the sectional committees has evolved a national programme for India and this has now been accepted by the central IBP office in London.

Measures

The third general assembly on IBP to concert measures regarding the programmes of different countries is to be held in Varna, Bulgaria, in early April 1968. It is expected that out of the deliberations at Varna a clearer picture of the existing programme in different countries will emerge.

It is now possible, for the first time in biology, to think in cooperative terms by scientists working in different countries,—an advantage which will prevail long after the five-year period of the programme. Already we have several offers of collaboration from the U.K., U.S.A. and U.S.S.R. Such bilateral and multilateral research projects produce results more rapidly than if the participating countries did it alone. Among such projects, mention may be made of the project on extraction of protein from leaves. The U.K. committee for IBP is interested in this project and have offered to provide the equipment and train personnel. Another project is on the camel. The Soviet IBP chairman is enthusiastic in having a bilateral programme on the camel based in Afghanistan. Another project in which the U.S.A. (Smithsonian institution) has evinced interest is the study of the cow problem in India. They have offered to collaborate with India in a demographic study of cows based on advanced principles of ecology and animal husbandry. The U.K.-IBP committee already has schemes on marine research being carried on in this country and has more recently expressed interest in collaborating with India on a few others such as the project on extraction of leaf proteins and some projects under the human adaptability section.

India has submitted to the central IBP in London a total of 56 projects with a financial outlay of about Rs. 1.76 crores. These projects need funds for their successful implementation.

DELHI IIT

A Fillip in Engineering Education

The President, Dr Zakir Husain, last month inaugurated the buildings of the Indian Institute of Technology, Hauz Khas, New Delhi. This institute, a symbol of Indo-British close collaboration has been built at a cost of over Rs. 10 crores. This is an institute of national improtance deemed to be university and is competent to award its own degrees. This is fifth in the chain of institutes of technology established in the various parts of the country. The article traces the background and the various stages that led to the establishment of this institute, including its future expansion.

To keep pace with the galloping expansion of our industrial and technical establishments, immense need was felt for a modern, uptodate and fully-equipped institute to impart engineering and technological education.

New Delhi's institute in Hauz Khas, the fifth in the chain of institutes of technology and the latest to come into existence, has ably met the demands made on it from this part of the country. The other four of the chain are located at Kharagpur, Kanpur, Madras and Bombay.

The most notable features of these institutes is that all of them have been established with economic and expert assistance received from the friendly countries and some international organisations in the form of scientific and technical equipment, services of leading professors in engineering and technical and facilities afforded abroad for training Indian teachers. The various institutions and countries which have aided these projects are UNESCO, Colombo Plan, U.S.A. Soviet Union, West Germany and Britain.

Collaboration

The institute of technology at Hauz Khas was established in 1961 in collaboration with the United Kingdom. To begin with, the institute was started as a college of engineering affiliated to Delhi University. It was upgraded in 1963 as an institute of national importance deemed to be university with powers to decide its own academic policy and confer the various engineering degrees. In fact, a proposal to establish an engineering college was mooted way back in 1958. Construction, however, commenced on the 250-acre plot on January 27, 1959, when the Duke of Edinburgh laid the foundation-stone. Later, another plot of 70 acres was acquired.

The British Government and

At I.I.T., New Delhi : *A teacher explaining an electrical device to students in the electrical engineering department laboratory in the Indian Institute of Technology, Hauz Khas, New Delhi.*

the Federation of British Industries provided economic assistance worth £6,50,000 to purchase equipment in the U.K. and train institute's teachers in the Imperial College of Science and Tchnology, London. The British aid is administered by Delhi institute of technology trust. Besides, 15 British professors were posted at the institute in the beginning. Total expenditure on provision of various facilities—land, services and buildings—has been worked out at Rs. 9,54,50, 674. This does not include the cost of work executed by the various departments of the institute.

According to Professor R. N. Dogra, director, "the role of the institute is essentially to produce teachers and research workers as well as development and design engineers. This is what we in the I.I.T. are trying to do. My feeling is that in order to do so successfully, we should develop dialogue or relationship with industry."

The main aims of the institutes are to provide academic atmosphere conducive to development of student's mind. Besides, it will promote higher standard of education; it attempts to do this by providing as a balanced and broadbased curriculum which gives other opportunities for the development of the students potentialities. The undergraduate curriculum is based on a sound understanding of physical sciences. At the undergraduate level, the attempt is to establish in the student's mind clearly the basic fundamentals underlying each discipline and their relationship to the existing technologies with the object of developing his analytical ability, capacity for logical deduction and ability to synthesise in a new situation. This means establishing bridges between different disciplines and recongising the unity of knowledge. A practical acquaintanceship with workshop techniques and necessary explosive and social sciences.

Prof Dogra believes that the institute can considerably help the industry by training broadbased technically competent executives with capacity to develop either as a design and development engineers or as a teachers or research workers. Thus the institute can provide leadership and research the industry needs. Development of industry in the country after independence has been most phenomenal. India has made rapid strides in several new directions and expanded the existing industrial units. Besides, the significant innovations in the field of defence production require the engineers and technical experts to make vital contribution in this direction. This is here where the highly trained and well-equipped engineers, technologists and scientists can contribute their mite.

At the postgraduate level, curricula in the institute are designed to provide specialised depth courses in specific areas as well as rigorous training in research me-

thodology and design. Postgraduate course work also aims to provide for the special study of recent advances in a particular field of knowledge. It is the policy of the institute that, while fundamental research must necessarily be furthered, the major emphasis should be directed to problems which have an immediate bearing on industrial development. The institute has embarked upon the ambitious research programme.

Outside the classrooms, through a variety of extra-curricular activities, sports, indoor games and clubs, facilities are provided for a further growth and development in student's personality and initiative. The fully residential nature of the institute which enables staff and students to be in continuous contact on the campus is instrumental towards achieving the aims and objectives.

The institute has its own campus with a separate residential quarters for students, teachers and other administrative staff. Students are accommodated in six hostels. There is a plan to build two more hostels for boys and one for girls. There are, at present, 1,650 students, including 20 girls and 40 foreign scholars, in the institute. Of them, 1,300 are studying for their undergraduate and about 200 for postgraduate degrees; the remaining are working for their doctorates. The institute has a target capacity of 3,000 students.

Departments

The institute has at present the following departments: applied mechanics, chemical engineering, mechanical engineering, textile technology, civil engineering, electrical engineering, chemistry, physics, mathematics, humanities and social sciences. In the postgraduate courses, M.Sc. and M.Tech. degrees are awarded in the following subjects: two-year M. Tech. courses : applied optics, solid state physics, control engineering instrumentation, electronics, electrical communications engineering, production and industrial engineering, concrete structures and technology, soil mechanics, thermal engineering, textile engineering and design engineering. Two-year M.Sc. courses in mathematics, chemistry and physics. One-year diploma courses in applied optics, solid state physics, control system engineering/instrumentation. electronics/electrical communications engineering, soil mechanics, concrete structures and technology and numerical analysis and automatic computing. There are about 20 research scholars pursuing their work for doctorate in different subjects. There are plans to include new courses in aeronautics and metallurgy in the near future. Most of the students who qualified in first batch from the institute have been absorbed on good jobs in reputed industries.

Facilities

The students at the campus are provided with various recreational facilities, spacious playground, and an extra curricular activities centre. There are numerous students associations and clubs to properly channelise the student's energies.

The Presdient, Dr Zakir Husain, recently inaugurated the building complex of the institute. However, the constructoin work is still in progress on small projects. Dr Husain rightlyremarked on the occasion that the institute was charged with a very big task to provide skilled manpower for the nation's needs. In his words "The institutes of technology should not be satsified merely by maintaining the highest standards. They should also evolve techniques to avoid waste, to make the best use of all available facilities and to reduce costs to as low a level as possible."— *M.R.D.*

NON-RECEIPT OF UNIVERSITY NEWS

University News is posted on the 7th of every month. In case a subscriber does not receive it by the 20th of the month, he should inform this office immediately and duplicate copy will be supplied. Requests received for a replacement copy after the new issue has appeared, cannot be entertained.

Leningrad Has Many Libraries

Leningrad in the Soviet Union has the largest number of libraries. The city's oldest library, founded during the reign of Peter the Great and now attached to the Academy of Sciences has 12 million volumes and 40 reading rooms

The Saltykov-Shcherdrin public library has 16 million volumes, and is even larger, containing books in 90 languages of the Soviet peoples, 30 languages of West Europe and 126 languages of the Asian and African peoples.

More than 2,000 books are issued to readers every hour.

In all, there are 2,600 libraries in Leningrad, including those run by the trade unions and other organisations. Leningrad has an institute, founded in 1918, for training highly skilled specialists for libraries and a library technical school. At present, there are 24 library books per resident of the city.

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500 Dogri Tales To Be Published

Dr (Mrs) Noriko Mayeda, Tokyo-born professor of Indian studies in the USA, has decided to publish 400 Dogri folk tales. Dr Mayeda came to Jammu from the USA in 1963 and collected nearly 500 folk tales from the interior of the province for her research work.

She got Ph.D. degree from the University of Pennsylvania (USA) for her thesis on Dogri folk tales in 1965. She is the first scholar to receive the doctorate on Dogri folk literature from the university.

An elaborate edition of her research work will appear from Tokyo this year, according to Mrs. Mayeda.

Campus News

Madras Varsity Plans Area Studies Department

AT its meeting recently, the Madras University academic Council has recommended to the senate the institution of numerous courses from the next academic year.

The university plans to introduce an M.A. degree course in "Area Studies"—pertaining to the history, philosophy, religion and culture of Ceylon, Malaysia and Burma. The syllabus for the course is being formulated by a special committee.

University's this proposal is in pursuance of the University Grants Commission's suggestion to institute a department of "Area Studies". It is proposed that in the first year of this course, the students will study history of Ceylon, of Malaysia, of Burma and political institutions in these countries. In the second year, subjects pertaining to these countries relating to modern economic history, philosophy, religion and culture and language would form part of curricula. The candidate will have to offer one of the three languages — Sinhalese, Malay or Burmese.

Physical Education Degree

The council also recommended the institution of a degree of bachelor of physical education, which will replace the present diploma course.

Meanwhile, the council approved the regulations for the new three-year B. L. degree and two-year B.G.L. (bachelor of general laws) course. The council also recommended that a one-year postgraduate diploma in traffic engineering be instituted. It was suggested that a diploma course in geography may be started for the benefit of non-geography graduate teachers.

Bombay: The university has decided to establish seven new departments viz., Marathi, Gujarati, Hindi, history, journalism, education and biology.

Panjab: The Chandigarh Yale project on search for early man was inaugurated at the campus last month by Dr V. K. R. V. Roa, Union Minister for Transport and Shipping. Yale University had launched search for higher primates in the Shiwalik Range in 1932 and recovered skeletal fragments of primates, one of which was named Ramapithecus. The present project is being conducted at a joint research centre of the university's anthropology department at Chandigarh.

Dr Elwyn Simons, director of the division of palaentology of the Yale University Peabody Museum, described the Shiwalik hills as a fairly ancient area of natural science because of lightly warmer climate.

The department of Gandhian studies recently organised a course of three lectures by Mr R. R. Diwakar.

Meanwhile, with a view to improving students' facilities at the campus, the university proposes to start a students home at the campus. The Rs. 7-lakhs project would be completed within three years with the assistance from University Grants Commission.

The students, home will have furnished rooms for the stay of parents and guests of the students. At present, there is one guest house with insufficient accommodation.

The university has also decided to set up a housing bureau on the pattern of American universities from the next academic year. The bureau would assist the students in securing accommodation outside the university campus at reasonable rents.

B.H.U.: A postgraduate diploma course in journalism is proposed to be started by the university from the next academic year. The university academic council has set up a committee to make recommendations in this connection.

An Indo-Nepal Yuvak Maitri Sangh and the Malayalee Association have been formed in the campus. Dr A. C. Joshi, vice-chancellor, recently inaugurated the associations at the campus.

Delhi : The university has a proposal to start correspondence course for M.A. in the near future.

According to Prof M. C. Shukla, director of correspondence courses, a committee has been appointed to look into the feasibility of the courses.

Delhi was the first university in the country to start correspondence courses for B.A. and has at present about 9,000 students studying in the courses. The university will, however, take sometime to start M.Sc. correspondence course.

Kurukshetra : The Ganita Bhavan (mathematics block) built at a cost of Rs. 3.50 lakhs was recently inaugurated by the Governor of Haryana, Mr B. N. Chakravarty. The block will accommodate mathematics department including research scholars and students.

Gauhati : The university has started classes in the Russian language. Mr V. Beldyushikn has been appointed to conduct the courses in the university.

Indore : The university academic court recently decided to introduce East Asian studies as a subject at the B.A. level in the arts faculty. This has been proposed preparatory to the establishment of a centre of East Asian studies under the university.

The university plans to introduce a course in the Chinese language. Introduction of courses in the Russian and Spanish languages also forms a part of university's future expansion projects. Besides, a proposal to institute a course in Tamil is under consideration.

A building, known as "Bhasha Bhavan" (house of la nguage), has been completed. This building will house all the language departments.

Mysore : The university project to establish an additional postgraduate centre at Mangalore has been approved by the University Grants Commission. The centre would be located about seven miles from Mangalore. To begin with, teaching facilities for mathematics, physics, Kannada and bio-sciences would be provided at this centre.

According to Dr K. L. Shrimali, vice-chancellor, department of bio-sciences which brought correlation between physics and biology was the first of its kind in the country.

Karnatak : Two students, Mr R. M. Prabhu, M.A., philosophy and Mr V. S. Nadgir, B.A. part III, were recently awarded two first prizes in the national essay competition conducted by the University Grants Commission in connection with the celebrations of the international cooperation year in 1965 in the field of education and culture.

Mr Prabhu's essay was adjudged as the best among postgraduate competitors and was awarded Rs. 1,500. Mr Nadgir was awarded the first prize of Rs 1,000 among the under-graduate partipants in the competition.

Punjabi : The university has introduced M. Litt. degree as an intermediate research degree for the subjects of English, Hindi, Pujnabi, Persian and Sanskrit.

It has been decided to organise an all-India or an international seminar on the occasion of the 500th birth anniversary celebration of Guru Nanak in 1969. A sum of Rs. 15,000 be set apart for the purpose.

In pursuance of grow more food campaign, the university has produced grains worth of Rs 42,000 at its campus this year. Most of the campus which covers an area of 310 acres remains unoccupied.

20 MEDICAL COLLEGES DURING 4th PLAN

A proposal to set up 20 new medical colleges during the fourth plan with central assistance is reported to have been made in the 1968-69 budget.

A total outlay of Rs 20.77 crores has been made in the budget proposal under the scheme of setting up new medical colleges on the approved pattern of 50 per cent of the expenditure both for the recurring and the non-recurring items.

To meet the demand for doctors, since 1962, the admission capacity in the medical colleges has been increased by 2,008 under a special scheme up to the end of the third plan. Two hundred and thirty-five seats were added to the medical colleges during 1966-67.

Meanwhile, a medical college in memory of Mr Feroze Gandhi is proposed to be established in Haryana in near future, according to the secretary of the All-India Feroze Gandhi memorial society.

JOB-ORIENTED COLLEGE FOR DELHI

Delhi University will institute a job-oriented college in the near future. The college will provide specialized studies in economics and commerce and train students for B.Com. (Hons), B.A. (Hons) and allied disciplines.

Courses equivalent to B.A. pass will also be introduced in the college to complete the three-tier approach—the pass course in commerce, honours course in commerce and the honours course in economics.

Other courses such as accountancy, business management and foreign trade will follow. There may be short-term postgraduate courses for specialized training in banking, management, and mechanical devices such as computers.

A long-term plan on these lines will help in keeping the perspective clear for the college.

PERSONAL

Dr L. S. Negi, director of agriculture and additional commissioner for agricultural production, Himachal Pradesh, has been appointed Vice-Chancellor of Jawaharlal Nehru Krishi Vishwavividyalaya, Jabalpur.

Dr J. S. Patel, founder Vice-Chancellor of Jawaharlala Nehru Krishi Vishwavidyalaya, Jabalpur, retired from the post last month.

Dr K. K. Datta, Vice-Chancellor of Patna University, has been re-appointed for another term.

Mr Suraj Bhan, Vice-Chancellor of Panjab University, has been re-appointed in that post for another term of three year.

Mr R. K. Kapur, executive director of the Asian educational planning and administration institute, has been appointed Vice-Chancellor of Sambalpur University.

Prof A. B. Lal, head of the political science department, Allahabad University, has been appointed temporary Vice-Chancellor of that university.

Dr Hazari Prasad Dwivedi, a noted Hindi writer, has been appointed rector of the Banaras Hindu University. Dr Dwivedi joined BHU two months ago as the head of the department of Hindi.

Mr Bal Krishna, secretary of the Punjab University publication bureau, has been awarded a prize of Rs. 1,000 by Government of India for his Hindi book on Einstein.

Dr Kalyana T. Mahanthappa of India, a specialist in theoretical high energy physics, will direct the University of Colorado's 11th annual institute of theoretical physics. Dr. Mahanthappa joined the University of Colorado early this year.

Miss Mehroo Mogul of Bombay Cancer Research Institute has been awarded the 1968 Essec Prize worth 10,000 francs.

Dr Basavaraj Urs, Principal of Jawaharlal Nehru Medical College, Belgaum, has been elected a "Follow quo Physician" of the Royal College of the Physicians and Surgeons, Glasgow.

Vital Need to Link Education With Life, Says Gadgil

From our Special Correspondent

LINKING of education with life was the need of hour. This is possible by coordinating the various educational stages and the contents of the educational activity before a student leaves an educational institution and enters life.

This statement was made by Dr D. R. Gadgil, Deputy Chairman of the Planning Commission, while inaugurating the conference of the state education secretaries in New Delhi last month.

The other important points made by Dr Gadgil were:

The constitutional directive regarding the spread of free and compulsory primary education must receive high priority in future educational planning.

The institutional and other facilities brought into existence to provide technical and vocational education must be linked with the demand for technically-qualified manpower. An excessive supply of highly qualified technicians creates far greater problems of unemployment than the oversupply of those with a general education.

Link with Life

That education should be more closely linked with social life and environment has been widely acknowledged for a long time. However, not much success has yet been attained in this direction.

Affording free educational facilities to a large or small minority of people who can afford to pay is unnecessarily wasteful. Therefore, a system by which an appropriate charge for educational services is combined with a large scheme of scholarships and freeships appears most appropriate in the present circumstances in India.

The following are the excerpts from Dr Gadgil's address:

In framing proposals for the fifth five-year plan scheduled to begin April 1, 1969, changes in circumstances during the last three years have to be kept in view. And these changes must be fully allowed for. Further, the comprehensive survey of all stages and aspects of education undertaken by the Education Commission and its recent report particularly facilitate rethinking as regards future educational planned progress. The main emphasis during the first three five-year plans in education was on quantitative progress in established fields and on institutional diversification. This followed from the extreme backwardness of the coverage and level of general education 20 years ago and from the pressing needs of industrial development and technological transformation of agriculture. Though we have Still to go a long way in all these directions, sufficient progress has been made to enable us to think of other things. In quantitative terms or in terms of continued expansion of educational activity, the important points to note are that over a large part of the country we have not still fulfilled the constitutional directive regarding spread of primary education. This has to have high priority in future plans.

In secondary education and in collegiate education of the general type, considerable progress has been registered in the recent past in a number of states and as pointed out by the Education Commission, time has come to rationalise and regulate future growth. Regulation of locational spread of institutions and the maintenance of a minimum quality are important. I do not feel that a purely restrictive attitude in this behalf is appropriate. Educational opportunity at this level is one of the main instruments of social change the progress operating in our society. At the same time, continuing restraint of resources emphasis the need to economise in and to rationalise the process of institutional spread, and the generally expressed concern at deteriorating standards emphasises that strenuous efforts at maintaining a minimum level of quality must be made.

While, in my opinion, considerations arising out of manpower planning cannot be properly applied to the field of general education, these have full relevance to the field of technical, vocational and professional education. This is the stage at which special effort, which is sometimes very costly has to be made to provide for the supply of specialised workers and technicians that scientific and industrial advance demands. The institutional and other facilities brought into existence to provide this trained manpower must be linked with estimates of demand for them; first, because excessive supply wastes national resources and secondly, because oversupply of highly qualified technicians leads to much greater difficulties in case of unemployment than the oversupply of those with general education, as the latter can be fitted into a number of possible openings.

Educational Progress

Careful quantitative appraisal of the present state of coverage and performance in various stages of education, the locational distribution of institutions, the training of teachers and the specialised manpower requirements of the future will all have to be undertaken in preparing plans for this aspect of educational progress. Other aspects which appear less important from this quantitative point of view now deserve much greater attention. The first group is related to the concept of integration of educational activity with social living. That education should be more closely

linked with social life and environment has been widely acknowledged for a long time. However, not much success has yet been attained in this direction. I may illustrate by reference to two sets of proposals in this connection, namely, that of integrating actual experience of manual and other work in the educational process and that of preparing students for national or social service through special training in this behalf.

To my knowledge, there have been as yet no successful demonstrations of integrating work experience at any stage of education in our country which can be multiplied at costs which we can afford and have results which are of significance in education. This may appear an extreme statement to make and may be largely born out of ignorance. I would very much like to be enlightened

Costly Failure

In the direction of national or social service again, there is little to go upon. I consider the compulsory N.C.C. as an enormously costly failure and the idea of general national social service has yet to be concretised.

There is another aspect to this linking of education with life. This is that of coordinating the division of educational stages and the content of educational activity with the exit of students from educational institutions and, therefore, welcome the emphasis placed on part-time education, correspondence, own education etc. in the report of the Education Commission. This is a complicated matter in which coordinated efforts of many parties will be required.

Another set of problems which may be considered together relate to qualitative improvement in education. This is a field in which it is not so much experimentation or new pilot projects as honest and sincere application and a small increase in resources that is required. Qualitative improvement in education whether we look upon it as a matter of better text-books, improved teaching methods, or examination reform depends to some extent on additional resources properly employed but to a larger extent on the ability and sincerity of teachers.

Whereas, I would emphasis the need to attain a proper teacher-student ratio and to maintain minimum standards of accommodation and equipment, I would like to emphasise at least equally the importance of general acceptance of certain academic values and professional standards by the body of teachers at all stages of education.

Problems of finance constitute another group. In this context it has to be remembered that we are not only a poor community but one in which incomes are very unequally distributed. Because of our poverty it is not possible for the State to maintain widespread and varied educational services free. Barring the primary stage, general free education is not only not possible but, financially speaking, not also desirable. Affording free facilities to large or small the minority who can afford to pay is unnecessarily wasteful of resources in our country. Therefore, a system by which an appropriate charge for educational services is combined with a large scheme of scholarships and freeships appears most appropriate to our circumstances. The main requirements in this scheme appears to be of some elaboration, as of introduction of a half-fee stage, some discrimanation related to performance and a proper enforcement through laying down norms of assessment of income levels and applying them strictly. With the improvements, the system should prove very useful.

Two ideas put forward by the Education Commission may appropriately be referred to at this stage. The first is that of cluster-scholarships. Another idea of the commission which has some relevance to the education of the poorer classes and special reference to integration of the community is that of the neighbourhood schools.

The two main difficulties that come immediately to mind in this regard are: first, the richest classes will always escape the compulsion of the neighbourhood schools and more importantly, until the general level of performance of the public school system such as of the municipal schools is raised very much higher, the middle-classes who are much concerned with the quality of education may unduly suffer, and, moreover, the average quality of education itself may go down in most institutions.

Resources

What should be attempted within the next five years with available resources in a given state or locality has to be related to the existing situation with its achievements, its lacunae and its specially crying needs. It is from this point of view that I would specially commend one recommendation of the Education Commission. This relates to adopting the district as not only basis of administration but also of planinng.

In this planning the stages are obvious. The first is a careful assessment of the existing situation as it has developed during the last 20 years. The second is the identification of the proximate goals in the light of accepted national objectives and of the special deficiencies and requirements of the local situations. The third is an assessment of the total resources—state, community and private—which can be harnessed towards progress of education and the last is that of the detailed planning so that the variety of goals set before the district as a whole are fulfilled through a careful and intelligent deployment of resources—financial and personnel, and optimum results obtained.

Research in Indian System of Medicine

The Government of India has almost doubled the allocation for research and postgraduate in Indian system of medicine; Rs. 27.5 lakhs has been spent during 1967-68, and Rs. 50 lakhs allocated for the next financial year.

Six Farm Scientists Honoured

Six scientists have been awarded the Rafi Ahmed Kidwai memorial prize for agricultural research during 1965. The awards were announced by the Indian council of agricultural research.

The six agricultural scientists are: Dr S. S. Bains, head of the division of agronomy, Indian agricultural research institute, New Delhi (for agronomy), Mr A. M. Michael, associate professor of agricultural engineering, Punjab Agricultural University, Ludhiana (for agricultural engineering), Dr J. S. Kanwar deputy director-general, Indian council of agricultural research, New Delhi (for agricultural chemistry), Dr H. D. Srivastava, head of the division of parasitology, and Dr S. C. Dutt, helminthologist, both of the Indian veterinary research institute, Izatnagar (for animal diseases), and Dr Pushkarnath, director, central potato research institute, Simla (for agricultural botany).

Dr H. D. Srivastava and Dr S. C. Dutt will share the prize money equally.

The Rafi Ahmed Kidwai memorial prize for agricultural research was instituted by the ICAR to perpetuate the memory of Mr Rafi Ahmed Kidwai, who was the president of the society from 1952-54 to create an incentive for research workers in India and to recognise outstanding research work done by them in the fields of agriculture, animal husbandry and allied sciences.

The prizes, Rs. 5,000 each, are awarded every two years.

* * *

Prize amounting to Rs 71,500 will be awarded in 1968-69 by the U. P. Government from the Hindi literature fund to authors of Hindi books on literature science, law and jurisprudence, philosophy and history.

Commonwealth Meet Reviews Educational Progress

By our Special Correspondent

THE role of education in rural development, increased number of scholarships, growing importance of curricula planning and development for developing countries, full educational opportunities for women and how technical education could contribute towards industrialization of developing countries and the various teacher training schemes were some of the subjects discussed at the Commonwealth Education Conference held as Lagos, Nigeria, recently. The conference highlighted the benefits of educational co-operation in the Commonwealth.

The conference also examined various schemes for co-operating assistance for social, economic and industrial development.

The conference which concluded on March 9 last (briefly reported in the March issue), was attended by 150 educational experts, including ministers, vice-chancellors, professors, educational advisers and administrators.

The Indian team was headed by the Union Education Secretary, Mr Prem Kirpal. He proposed a five-point programme for Commonwealth co-operation for education. at the conference.

New Challenges

For two weeks, the conference discussed problems and sought solutions, reviewed existing schemes of collaboration and talked about possible improvements, looked at the future—against the background of general economic difficulties and population explosion—and wondered how their people, young and old, could be trained to meet the new challenges.

It was acknowledged that the world was moving ahead far too rapidly for any benefit to accrue from the traditional and conservative curricula. Therefore, funds and economic assistance should be put to the best use possible.

In other words, the content and quality of education in every field should be so improved that the average person—not just the graduate—can play a full part in the national life of the country.

Were perhaps, some developing countries teaching the wrong subjects or teaching the right ones the wrong way, the conference wondered. It thoroughly examined the cirriculum development, a key subject.

Rural Programmes

On educating rural communities, it was stated that the targets of education in the rural areas should not be the children but the adults, the people who could increase productivity immediately if they had the knowledge and the "know-how".

It was urged that the education division of the Commonwealth secretariat should play a key role by "spotting", within the Commonwealth, educational projects and innovations that could be significant.

This could perhaps be described as the most imaginative proposal for Commonwealth co-operation in education since the birth of the Commonwealth scholarship scheme in 1959. And it could have equally far-reaching effects.

The conference paid rich tributes to the Nigerian Government for holding its session in Lagos in spite of a domestic crisis.

The five-point programme which was submitted by India at the conference was put before the Commonwealth liaison committee. The committee was asked to study the implications of the programme and take early steps.

The five major projects put before the conference by Mr Prem Kirpal are as under:

Building centres of excellence at the levels of secondary and university education: Expansion of facilities and mounting enrolments tend to depress standards and the quest for quality of education suffers. With scarce resources to cope with a massive quantitative expansion, it is essential to adopt a selective approach to provide a good education at a limited number of centres of excellence which would aim at the highest standards for talented students.

Adult Education

Pilot projects for functional literacy and adult education: It is admitted that functional literacy of adults and their continuing education bring quick dividends like economic and social development. UNESCO's experimental programme has found universal support, but only a small number of experimental projects can be launched by UNESCO because of the paucity of funds.

It is proposed that three additional pilot projects should be started under the Commonwealth co-operation programme.

Access to books: Some promising initiatives have been taken in the production and distribution of books and the development of books and the development of libraries. To meet the massive needs of developing countries for high-quality books at moderate costs, a major project of Commonwealth cooperation should be launched. This major project will comprise such elements as clearing house and training facilities, provision of paper and printing machinery, promoting managerial skills, the solution of copyright problem, and a greater flow of books to needy countries.

Science education: To achieve modernisation and better standards of living, the developing countries must extend the teaching of science and improve its quality both for formal and informal education.

Education research and experimentation: Research and experimentation are essential for improving the quality of education and reducing operational costs.

READERS' FORUM

I am a third year physics (Hons.) student hoping to clear the finals with a high first class and intend to continue my post-graduate study in atomics broad. Could you suggest some of the best universities abroad for this purpose and how to apply for admission; or please name some institutions wherefrom I can get the required information?

—Naresh Mohan, Delhi

It is extremely difficult to answer questions of a roving nature like this. Candidates must choose the course and the country and then, if possible, available facilities can be indicated in these columns.

However, if you are interested in a degree course in nuclear engineering in the U.K., you may apply to the University of London which has a B.Sc. (Engg.) course of three years duration in the Queen Mary College to which G.C.E.(A) certificate holders with physics as one of the subjects are admitted.

Several postgraduate diploma courses in nuclear enginering/technology are also available.

If you are interested in studying in the USA, you may contact the U.S.I.S. which would be in a position to help you with the necessary information.

My son passed first year science (biology) in 1965 in third division securing 44 per cent marks. (He lost his second division by one per cent only). I will be thankful to you if you would kindly give address of government and private medical colleges in India where he can get admission in first year.

—D. Husain, Jabalpur

In view of the keen competition for seats in medical colleges, most universities have prescribed a minimum of at least 50 per cent to be secured by candidates in the qualifying examination for admission to the same. Some others have laid down a minimum of 45 per cent.

As far as we are aware, the universities of Aligarh, Bihar, Jammu and Kashmir, Marathwada, Nagpur, Saugar and Utkal have not prescribed any such minimum. You may, therefore, first write to these universities to find out about the eligibility of of your son for admission to the MBBS course.

Please let me know whether the bachelor of law degree from Tribhuvan University, Kathmandu, Nepal, is recognised by the Indian universities or not. Is this degree given the same recognition as the degree from any Indian universites, or by only a few universities?

—Ishwar Palatri, Jind (Haryana)

The Universities of Banaras, Delhi, Gauhati, Karnatak Kerala, Osmania, Panjab, Punjabi, Rajasthan and Vikram have already recognised the bachelor of law degree awarded by the Tribhuvan University, Kathmandu, Nepal, as equivalent to their corresponding degree.

CONTRIBUTIONS!

Articles on different aspects of higher education in India and abroad and on students' problems, write-ups on universities and campus news are invited for publication in the University News. These may be sent to the Publication Officer, Inter-University Board of India & Ceylon, Rouse Avenue, New Delhi-1.

SCHOLARSHIPS

(*Continued from page 2*)

THE Indian Council of Medical Research has offered fellowships of the National Institutet of Health, U.S.A., for specialised training in that country. The candidates must have a doctoral degree or its equivalent in any recognised health science field, but not restricted to medicine, including M.D.S. with research experience.

The candidates should have secured a placement in the United States for their projected fields of study by correspondence and should hold a permanent post in this country. Application forms and deatils of fellowships can be had from the director-general, Indian Council of Medical Research, post box No. 494, New Delhi, on payment of the Re. 1 by crossed postal order in the name of Indian Council of Medical Research, New Delhi, up to April 30, 1968.

In Meteorology

The Institute of Tropical Meteorology, India Meteorological Department, Poona, will award two research fellowships of the value of Rs. 400 per month for three years.

Candidate must have first class master's degree in meteorology or geophysics or physics or applied mathematics with an aptitude for research.

Applications on prescribed forms may be submitted to the director, Institute of Tropical Meteorology, Meteorological Office, Ramdurg House, Ganeshkhind Road, Poona-5 by April 8, 1968.

Poona Prizes

Poona University will give cash prizes worth Rs. 36,000 to its top-ranking students at the annual graduating examinations in the six branches of engineering. The state board of technical examination was given Rs. 6,000 to give cash prizes to top-ranking students at the annual final year examinations in the various engineering courses.

Postgraduate Scholarships for 51 Girls

In order to promote girls' education in science at postgraduate level as also to make good the dearth of women science teachers at the intermediate and college level, 51 meritorious science graduate girls have been selected by the U.P. Education Department for the award of monthly scholarships of Rs. 100 each to enable them to pursue their postgraduate education in science.

The only condition for the recipients of these scholarships is that they have to give an undertaking to serve as a teacher for at least three years after completing their course in any government or non-government higher secondary school or degree college of their choice in the state.

As a result of making girls' education free up to class tenth by the state government, the number of girls in higher classes is steadily rising. But as the number of qualified women teachers is woefully small, particularly in science subjects. The government has extended the facility of the award of scholarships to provide incentive to girls, who have secured good second class marks in B.Sc. and are desirous of pursuing their studies at postgraduate level.

ADMISSION FOR PH.D. PALAEONTOLOGY

Candidates desiring to conduct post graduate research in palaeontology leading to Ph.D. will be admitted on their individual merits. Applications may be addressed to the registrar, Maharashtra association for the cultivation of science, rostgraduate research institute, Poona 4.

Agra Varsity Household Arts Institute

An institute of household arts and home science affiliated to Agra University was established at Khandari in U.P. recently. This is the first institute of its kind established under Agra University. The institute will cost Rs 14 lakhs and will have a rural background.

TUITION FEES ON INCOME BASIS

Michigan State University has evolved a plan under which the students will be charged fees according to their ability to pay.

The fees will be roughly equal to 3 per cent of gross family income.

Students from families earning less than $11,800 will pay the minimum fee of $350. Those from families earning more than $16,700 will pay the maximum $510. The 3 percent formula will cover those in between.

No allowance is made for size of family or number from the family attending university. All undergraduates will have to submit a copy of their parents' tax return.

BRITISH UNIVERSITY SUMMER SCHOOLS 1968

Under the joint programme of London, Oxford, Stratford-upon-Avon and Edinburgh universities, four summer schools would be held on the various aspects of English literature. The subjects proposed to be taken up at the institute would be : Shakespeare and Elizabethan drama at Startford-upon-Avon; the history, literature and the arts of seventeenth-century England at Oxford; at Edinburgh, four Scottish Universities will jointly present a study of the history, philosophy and literature of the period of the Englihtenment in Britain; and the theme of the London school will be twentieth-century English literature.

The courses are designed for graduate students, including teachers in universities and schools and for undergraduate students who will have completed the penultimate year of their degree course by June 1968.

For further information, please write to Secretary, Inter-University Board of India & Ceylon, Rouse Avenue, New Delhi-1.

A Revolutionary Innovation in Athletics

By G. S. Sivia

Assistant Secretary (Sports), IUB

A look into the history of Olympic games will focus attention on many thrilling scenes when the prospective record breaking champions, who in spite of devoting their full mental concentration and physical faculties to training for many a year, could not fulfil their inspired dream just because the wet surface of the track caused by a heavy downpour lashed out a day prior to the competitions stood in their way. This is mainly because of the shifting emphasis on national glories associated with winning medals which has reduced modern sport to training human organism against fatigue and channelising human energy through skill and technique.

To counterbalance the hazards of unfavourable weather condition which hitherto were beyond human control, an important material, known as "Tartan", has been evolved as a result of considerable research. 'Tartan' is a synethtic surfacing material which remains unaffected by variations in weather conditions and atmospheric humidity. Tracks having surface of this material do not lose evenness and uniformity of surface even after rain.

Since tartan surface is ready for use within 24 hours of rain, it does not require much care for maintenance. Being elastic, it affords suitable soft surface to the participants whose scientifically trained muscles are very sensitive to the nature of the track. They will no longer suffer from usual muscle injuries caused by uneven clay or cynder tracks, especially after rain.

Weather Changes

Innovation of tartan, therefore, has revolutionised the preparation of track surface and has relieved the athletes of tense psychological moments staring in their faces as shadow of frustration caused by sudden changes of weather to unfavourable conditions. Also, uncertainty of weather will no longer upset the organisers of athletic competitions.

According to Jesse Owens, the new material for running surfaces is one of the greatest advances ever made in track and field competitions. The technical experts of the International Athletic Federation also agree that with the tartan covered tracks, the runners should be able to record their best performances. With this in view, the use of tartan at the Mexico Olympics has been approved by the leading experts of the International Amateur Athletic Federation, organising committee of the games and other technical delegates. For the first time, in the history of Olympics, tartan will be used as surface of the track at the Mexico Olympics. A total of six tracks, including the Olympic Stadium at University City, will be covered with this synthetic material.

Variation

Now, a word about the innovation of this material : The remarkable credit goes to William McNight, a devoted student of horse-racing. During the many years' association with this sport, he observed that the surface of race tracks, which is generally of sand or clay, was subject to variations in rainy and sunny weather. This variation led to uneven performances by the horses; worse than that, it was a frequent cause of leg injuries to these animals, many of which were worth thousands of dollars.

He put in efforts to finding a solution so that the horse racing track would possess uniform consistency. Being founder of the Minnesota Mining and Manufacturing Company of St. Paul, he discussed the problem with an expert group of chemists and technicians of the company. Subsequently, they carried a lot of research in their laboratories and succeeded in evolving this new material which is an efficient substitute for clay or cynder.

How will the innovation of tartan affect performance of Indian athletes ?

Indian Athletes

It may be difficult to give an assertive answer at this stage but a well accepted psychological principle must be borne in mind, i.e., they must be used to this type of surface before it can prove of maximum advantage to their performances. In future international competitions, their counter parts, especially from advanced countries like the U.S.A., the U.S.S.R., Japan, the U.K. and other European countries, might have well trained their neuromuscular reactions to this type of surface. Many universities and colleges in the U.S. have already started using tartan for their tracks. The obvious immediate affect of the innovation of tartan will, therefore, be that the gap between Indian athletic standards and those of these countries will still widen because India will have to go a long way ahead before she can afford to popularise this material for preparing track surface.

20,000 BOOKS EVERY YEAR IN INDIA

India now ranks seventh among the book publishing countries of the world, producing over 20,000 titles a year.

Of the 20,287 books published during 1965-66, the titles in English accounted for 10,347, next came Hindi with 2,378 books, Marathi with 1,612, Bengali with 1,422.

The titles published in other languages, during the year were: Tamil 947, Gujarati 922, Malayalam 573, Telugu 518, Urdu 372, Kannada 241, Sanskrit 207, and Punjabi 167.

The average print order for general books in India is 1,000 to 3,000 copies. Books for children and neo-literates have a first print order of 2,000 to 10,000 copies.

IONOSPHERIC SOUND STATION IN MYSORE

An ionospheric sounding station is being installed at Manasagangotri on the Mysore University campus as a part of the cooperative study of the upper atmosphere by the German and Indian scientists using rockets launched from Thumba.

The equipment here consists of a powerful transmitter sending out of radio signals from one to 16 megacycles and receiving them back after reflection from the ionosphere.

Between March 18 and April 8 some rockets releasing barium clouds at heights ranging from 110 to 160 kms were launched from Thumba during the twilight of either evening or morning.

Salwan Award for Cochin Laboratory

The Indian Naval Physical Laboratory, Cochin, has won the Salwan Award for 1966.

The award (Rs. 5,000) is for useful scientific work and sophisticated instruments developed by the laboratory. These instruments are in regular use in oceanographic studies.

BRITISH EXHIBITION OF BOOKS

The British Council will organise book exhibitions in the various parts of India during this year. The book exhibition on "science and mathematics teaching" will include textbooks planned according to the new methods of teaching of these subjects including the Nuffield science teaching projects.

Another exhibition which would be devoted to medical books will interest students and teachers of medical colleges as well as the practising doctors and surgeons.

NEW WOMEN'S COLLEGE FOR DELHI

A new women's college will come into being in New Delhi from next academic year. The college to be built in Chanakyapuri will have a three-storey building. To begin with, admission will be made in the first year B.A. course. The college is being built by Convent of Jesus and Mary.

Language Institute for Simla

The Himachal Pradesh Government has decided to set up an institute of language at Simla at a cost of Rs. 30 lakhs. The institute will undertake research for development of the Himachali language. The institute will promote study of dialects spoken in tribal areas of Kinnaur, Lahaul and Spiti, Bharmour and Pangi.

Grant for Medium Switch-over

The Union Government proposes to give grant of Rs. 1 crore to every state to facilitate the change to medium of instruction to Hindi and regional languages at the university level.

Calcutta University Award for Novelist

Mr Bidhayak Bhattacharyya, eminent Bengali novelist, playwright and scenario writer, has been adjudged by Calcutta University as the best Bengali playwright of the year for his book, "Antony Kaviyal" He has been awarded the Sudhansubala Prize for 1967.

The prize worth Rs. 2,000 will be given to Mr Bhattacharyya at the next annual convocation of the university.

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Summer Science Institutes—1968

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		Biology	
Prof. BR Seshachar, Zoology Department, University of Delhi, Delhi	Delhi	Delhi-UP.	27 Sept.-20 Oct.
Prof. KS Bhargava, Botany Department, Gorakhpur University, Gorakhpur.	Gorakhpur	Bihar, West Bengal, Assam, Nagaland, NEFA, Tripura, Manipur & U.P.	15 May - 22 June
Prof. GP Sharma, Zoology Department, Punjab University, Chandigarh.	Chandigarh	J & K, Himachal Pradesh, Haryana & Punjab	1 June - 11 July
Prof. JJ Chinoy, Director, University School of Science, Ahmedabad.	Ahmedabad	Gujarat	6 May - 15 June
Dr. GT Tonapi, Zoology Department, Poona University, Poona	Poona	Maharashtra	13 May - 22 June
Dr. PN Srivastava, Zoology Department, Rajasthan University, Jaipur.	Jaipur	Rajasthan & Delhi.	13 May - 22 June
Prof. NB Inamdar, Zoology Department, Institute of Science, Bombay,	Bombay	Maharashtca & Rajasthan	5 May - 12 June
Prof. SB Saxena, Botany Department, Saugar University, Sagar.	Sagar	Madhya Pradesh & Orissa	1 June - 11 July
Prof. DB Kamath, Zoology Department, Shivaji University, Kolhapur	Kolhapur	Maharashtra & Goa	13 May - 22 June
Prof. MS Chennaveeraia, Botany Department, Karnatak University, Dharwar	Dharwar	Karnatak University Colleges	1 May - 9 June
Prof. KN Narayan, Botany Department, Mysore University, Mysore	Mysore	Mysore & Kerala	22 April - 1 June
Prof. MR Suxena, Botany Department, Osmania University, Hyderabad	Hyderabad	Andhra & Madras	13 May - 25 June
		Chemistry	
Dr. (Miss) KK Rohtagi, Chemistry Department, Jadavpur University Calcutta-32.	Calcutta	West Bengal, Assam, Manipur Tripura, Nagaland, & NEFA	13 May - 22 June
Prof. MK Rau, Chemistry Department, Rasavenshaw College, Cuttack	Cuttack	Orissa & Bihar	13 May - 22 June
Prof. GB Singh, Chemistry Department, Banaras Hindu University, Varanasi.	Varanasi	U.P. & Delhi.	13 May - 22 June
Prof. RC Paul, Chemistry Department, Punjab University, Chandigarh.	Chandigarh	Panjab, J & K , Himachal Pradesh & Haryana.	13 May - 22 June
Prof. G. V. Asolkar, Principal, Institute of Science, Nagpur.	Nagpur	Madhya Pradesh	29 April - 8 June
Prof. HJ Arnikar, Chemistry Deparrment, Poona University, Poona.	Poona	Maharahstra & Goa	13 May - 22 June
Prof. RC Mehrotra, Chemistry Department, Rajasthan University, Jaipur.	Jaipur	Rajasthan.	29 April - 8 June
Prof. RD Patel, Chemistry Department, Sardar Patel University, Vallabh Vidyanagar.	Vallabh Vidyanagar	Gujarat	6 May - 15 June
Prof. V Baliah, Chemistry Department, Annamalai University, Annamalainagar.	Annamalainagar	Madras & South Kerala	13 May - 22 June
Prof. G Gopala Rao, Chemistry Department, Andhra University, Waltair.	Waltair	Andhra	20 May - 29 June
Prof. H Sanke Gowda, Chemistry Department, Mysore University, Mysore.	Mysore	Mysore & North Kerala	22 April - 1 June
Prof. NV Subba Rao, Principal, Universtty College of Science, Hyderabad.	Hyderabad	College/University Teachers of Osmania.	13 May - 22 June
		Mathematics	
Prof. AC Srivastava, Mathematics Department, Dibrugarh University, Dibrugarh.	Dibrugarh	Assam, Nagaland,NEFA, Manipur & Tripura.	20 May - 22 June
Prof. RN Bhattacharya, Mathematics Department, Jadavpur University, Calcutta-32.	Calcutta	Bihar, Orissa & West Bengal	13 May - 22 June
Prof. JN Kapoor, Mathematics Department, Indian Institute of Technology, Kanpur.	Kanpur	Sequential	13 May - 22 June
Prof. B Ballabh, Mathematics Department, Lucknow University, Lucknow	Lucknow	U.P.	27 May - 6 July
Prof. SK Trehan, Mathematics Department, Panjab University, Chandigarh.	Chandigarh	Punjab, J & K, Haryana, HP	13 May - 22 June
Prof. RS Varma, Mathematics Department, Delhi University, Delhi.	Delhi	Sequential	29 April - 8 June
Prof. AR Roy, Statistics Department, Lucknow University, Lucknow. (in Statistics)	Lucknow	U.P. & Delhi	6 May - 15 June
Dr. T. Pati, Mathematics Department, Jabalpur University, Jabalpur,	Jabalpur	Madhya Pradesh	13 May - 22 June
Prof. RS Kushwaha, Mathematics Department, Jodhpur University, Jodhpur.	Jodhpur	Rajasthan	13 May - 22 June
Prof. UN Singh, Mathematics Department, MS University of Baroda, Baroda	Baroda	Gujarat	29 April - 8 June
Prof. VS Huzurbazar, Mathematics Department, Poona University, Poona.	Poona	Maharashtra & Goa	6 May - 15 June
Dr. R Ramachandran, Mathematics Department, Annamalai University, Annamalainagar.	Annamalainagar	Andhra Pradesh	13 May - 22 June
Prof. P Hariharan, Mathematics Department, Kerala University, Trivandrum.	Trivandrum	Kerala	22 April - 8 June
Prof. M Venkataraman, Mathematics Department, Madurai University, Madurai	Madurai	Madras	22 April - 8 June
Prof. PS Rau, Mathematics Department, Sri Venkateswara University, Triupati,	Triupati	Mysore	20 May - 29 June
		Physics	
Prof. PC Mahanta, Physics Department, Gauhati University, Guahati.	Gauhati	Assam, Nagaland, Manipur, Tripura & NEFA.	17 June - 26 July
Dr. T Roy, Physics Department, Jadavpur University, Calcutta-32.	Calcutta	West Bengal, Bihar & Orissa	13 May - 22 June
Prof. SY Tewari, Physics Department, Birla Institute of Technology & Science, Pilani.	Pilani	UP, J & K, HP, Haryana, Panjab & Delhi	20 May - 29 June

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DIRECTOR	LOCATION	REGION	DURATION
Porf. NS Pandya, Physics Department, MS University of Broada, Broada		Gujarat & Rajasthan	6 May - 15 June
Prof. C Mande, Physics Department, Nagpur University, Nagpur.		Maharashrra & Goa	20 May - 29 June
Prof. DR Bhawalkar, Physics Department, Saugar University, Sagar.		Madhya Pradesh	6 May - 15 June
Prof. B Ramachandra Rao, Physics Department, Andhra University, Waltair		Andhra & Madras	6 May - 15 June
Prof. DP Khandelwel, Physics Department, Agra College, Agra.		Agra University Colleges	28 April - 23 May
Prof. J, Mahanty, Physics Department, Indian Institute of Technlogy, Kanpur.		U.P.	13 May - 12 June
Prof. K Venkateswarlu, Physics Department, Kerala University Centre, Alwaye-4.		Kerala	29 April - 8 June
Prof. S Chandrasekhar, Physics Department, Mysore University, Mysore.		Mysore	22 April - 1 June
Special Institutes			
(These Institutes will enrol teachers on an All India Basis)			
Prof. R Mishra, Botany Department, Banacas Hindu University, Varanasi		Ecology	13 May - 22 June
Prof. OS Reddi, Genetics Department, Osmania University, Hyderabad		Genetics	15 May - 30 June
Prof. KK Nayar, Zoology Department, Kerala University, Trivandrum		Comparative Endocrinology	15 April - 18 May
Prof. SM Fazlur Rehman, Chemistry Department, Aligarh Muslim University, Aligarh		Organic Chemistry	13 May - 22 June
Dr. (Miss) D. Deulkar, Directress, Lady Irwin College, New Delhi.		Food & Nutrition for Home Sc. Teachers	29 April - 8 June
Prof. RS Vrama, Mathematics Department, Delhi University, Delhi		Modern Algebra & Operational Research	29 April - 8 June
Prof. GC Patni, Mathematics Department, Rajasthan University, Jaipur		Fluid Dynamics	20 May - 29 June
Prof. FC Auluck, Physics Department, Delhi University, Delhi		Solid State Physics	20 May - 29 June
Prof. J. Bhimasenachar, Physics Department, Sri Venkateswara University, Tirupati		Electronic Instrumentation	20 May - 29 June
Prof. A Abraham, Botany Department, Kerala University, Trivandrum		Radiation Genetics	15 April - 26 May

For application forms and further details, please write to the concerned Director of the Summer Institute of your region with a self-addressed envelope (24 cm x 11 cm). Selected teachers will be given travel expenses, free board and lodging and out of pocket allowance at the Institute.

SITUATIONS ABROAD

MANCHESTER University, invites applications for lecturer or assistant lecturer in occupational health up to April 24, 1968; assistant lecturer in Scandinavian studies up to April 26, 1968; senior lecturer or lecturer in periodonotology upto May 1, 1968; lecturer in Greek and Latin up to April 22, 1968;

A post-doctoral research fellowship in chemistry, tenable for two years to be arranged before October 1, 1968, is available at the university;)two Welcome scholarships in clinical pharmacology for 1968-69 session for clinical investigatos to attend the course leading to the diploma in clinical pharmacology are available at the university.

CAMBRIDGE University, Harrison Waston studentship for Medical research at Clare College, Cambridge, is available for medical graduates for research in T.B. Apply before April 30, 1968.

WALES University, College of Swansea invites applications for research fellowship in the centre of Russian and East European studies up to April 30, 1968. A research fellowship in chemistry in the department of chemistry is available. Applly before May 1, 1968.

SOUTHAMPTON University invites applications for assistant lecturership in music before May 13, 1968.

MALAYA University, faculty of medicine invites ap—lication for senior lecturer in obstetrics and gynaecology up to April 28, 1967.

STUDENTS SERVICES

(*Continued from page 8*)

adviser for every 200 candidates would be required. Their primary job should be to advise and secondary job would be to teach. Their academic designation would be lecturer. On their performance, they would be considered for promotion to the posts of assistant dean of students etc. The teachers needed for debating society etc. need not get concession in teaching load or honorarium. The very fact that help and guidance should be regarded as an additional qualification for their promotions. One of the advisers may be called upon to do the job of financial assistance, health and hygiene etc. All these advisers would also be available to the assistant deans to assist them in their duties.

It would indeed be a good idea to have a dean of student for the whole university and then to call the deans as associate deans at the faculty level. This dean of students will be responsible for the co-ordination between the faculty as well as he will be responsible for the central services like hostels, counselling etc. Separate staff would be needed for the central services. These will not be faculty members and for some jobs like warden's they will be part-time as at present.

Once the general pattern is accepted, other minor details can be thrashed out. This scheme has the double advantage. If a teacher decides to excel in student services, he can look forward to promotion and still retain a link and claim in the department. Recruitment of such persons would not be difficult.

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